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TA14. Refractive Index Determinations in the 0.5-13.0μ Region at Elevated Temperatures.* A. R. Thomas,† H. T. Betz, D. Mergerian, and W. A. Oberheim, Physics Division, Armour Research Foundation, Chicago, Illinois.--The refractive index of fused silica and other infrared transparent materials has been determined in the wavelength region from 0.5 to 13.0μ at different temperatures ranging from room temperature to 800°C. The method employed consists of a modification of the method used by McAlister, Villa, and Salzberg to measure infrared refractive indices at room temperature.[1] A calibrated Perkin-Elmer screw is employed to rotate the sample prism in a furnace, and the incident radiation, after passing through the sample prism at minimum deviation, enters a system consisting of two separate monochrometers before passing to the detector.

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1 McAlister, Villa and Salzberg, J. Opt. Soc. Am. 46, 485 (1956)

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